STATE OF CALIFORNIA
**Budget Change Proposal - Cover Sheet**
DF-46 (REV 08/15)

| Fiscal Year | Business Unit | Department | Priority No. |
|---|---|---|---|
| 2016-17 | 3900 | Air Resources Board | 1 |

| Budget Request Name | Program | Subprogram |
|---|---|---|
| 3900-L01-BCP-BR-2016-GB | **3510 – CLIMATE CHANGE** | |

Budget Request Description
Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Budget Request Summary
The Air Resources Board is requesting 3.0 permanent full-time positions to support a better understanding of plug-in electric vehicle energy demand projections and environmental benefits associated with plug-in electric vehicle use in California, including in low income and disadvantaged communities, evaluate and report on how to increase access to zero or near-zero transportation for low-income customers, and develop greenhouse gas planning targets, in consultation with PUC and CEC, for the integrated resource plans (IRPs) they are tasked with developing for the electricity sector and investor-owned and public utilities, which will need to increase their overall renewable portfolio to 50 percent. These activities are critical so that the Air Resources Board can meet its obligations under SB350 (Chapter 547, Statutes of 2015) and the State can meet its near- and long-term climate goals and reduce dependence on traditional fossil fuels.

| Requires Legislation | Code Section(s) to be Added/Amended/Repealed |
|---|---|
| ☐ Yes ☒ No | |

| Does this BCP contain information technology (IT) components? ☐ Yes ☒ No<br>*If yes, departmental Chief Information Officer must sign.* | Department CIO | Date |
|---|---|---|
| | | |

For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance.
☐ FSR ☐ SPR Project No. Date:

If proposal affects another department, does other department concur with proposal? ☐ Yes ☐ No
*Attach comments of affected department, signed and dated by the department director or designee.*

| Prepared By | Date | Reviewed By | Date |
|---|---|---|---|
| Floyd Vergara | 1/15/16 | Alice Stebbins | 1-15-16 |
| **Department Director** | **Date** | **Agency Secretary** | **Date** |
| Richard W. Corey | 1/15/2016 | Matthew Rodriquez | 1/15/16 |

**Department of Finance Use Only**

Additional Review: ☐ Capital Outlay ☐ ITCU ☐ FSCU ☐ OSAE ☐ CALSTARS ☐ Dept. of Technology

BCP Type: ☐ Policy ☐ Workload Budget per Government Code 13308.05

| PPBA | Original Signed By: Ellen Moratti | Date submitted to the Legislature | 1/14/16 |
|---|---|---|---|

## Analysis of Problem

### A. Budget Request Summary

Senate Bill (SB) 350 establishes a 50 percent obligation for renewable electricity under the Renewables Portfolio Standard and a doubling of building energy efficiency savings in electricity and natural gas use, both to be achieved by the end of 2030. The bill makes several other changes to support the achievement of the State's climate and clean energy goals. First, it promotes transportation electrification by effectively requiring utilities to invest in the charging infrastructure necessary to help support the Governor's target of 1.5 million zero emission vehicles by 2025 and, relatedly, for the Air Resources Board (ARB or Board) to analyze and report on how to increase access to zero and near-zero transportation for low-income communities. Second, it requires utilities to develop integrated resource plans (IRP) providing a more diverse, lower carbon and balanced energy portfolio, while supporting IRPs alignment with greenhouse gas emissions (GHG) targets established by ARB. In order to achieve this, ARB is requesting 3.0 permanent full-time (FT) positions. More specifically, this request is for 3.0 Air Resources Engineers (ARE) and $485,000 from Cost of Implementation Account.

***Reduction of GHG's in the Transportation Sector***

ARB has the authority to develop vehicle emission and advanced technology regulations. Specifically, ARB manages the Advanced Clean Cars program, which includes the Zero Emission Vehicle (ZEV) mandate as well as the Low Emission Vehicle (LEV) criteria and greenhouse gas (GHG) fleet emission standards. These policies are periodically updated and re-adopted by the Board to ensure the light duty vehicle (LDV) sector is on track to reduce emissions toward the State's public health and climate targets. These policies require automakers to place plug-in electric vehicles (PEV) throughout the State of California. To support these goals, ARB also manages a suite of incentive programs to help with the deployment of these vehicles.

SB 350, subdivisions (b) and (c) of Section 740.12, directly relate to "transportation electrification" whereby a growing number of PEVs are accessing the electric grid for power. Subdivision (b) requires the Public Utilities Commission (PUC) to consult with ARB prior to approving electricity provider investments in charging infrastructure, and subdivision (c) requires the PUC to evaluate the utilization of existing charging infrastructure prior to approving new investments.

ARB's Advanced Clean Cars program, and the complementary programs that incentivize consumer adoption, have a number of areas of analysis that could directly inform the PUC in these decisions, and it is important that this coordination occur so that PEV markets are successful. Generally, the scale of electricity provider investments should be proportional to how many new PEVs are expected in the near future. ARB's ZEV mandate conducts regular analyses to project PEV growth in California, and ARB is currently conducting a "Midterm Review" comprised of a technology assessment, and evaluation of the health of the electric vehicle consumer market. Looking beyond near-term regulations, ARB projects long-term needs for light-duty electric vehicles to inform the State Implementation Plan (SIP) to meet the federal ozone requirements and the Assembly Bill (AB) 32 Scoping Plan to meet the State's climate targets.

**Electric Charging Infrastructure Needs Assessments**

As part of these policy efforts, ARB conducts analysis of how PEV drivers are using their vehicles, which includes charging routines. ARB already coordinates with the PUC and California Energy Commission (CEC) on infrastructure efforts and would need to expand this coordination to accommodate the additional requirements of SB 350. Implementing subdivision (b) of section 740.12 requires an understanding of the role of infrastructure provided by electric utilities, as part of a broader charging network for all PEV drivers; specifically, how much infrastructure is required, and how much of that should come from electricity providers compared to other investments. ARB and CEC analysis currently evaluates how much PEV drivers use home vs. work vs. public electric charging and what factors inform these decisions. In a similar analysis, ARB staff has been working with the Buildings Standards Commission to evaluate the role of charging infrastructure in new construction, and how that niche of infrastructure helps towards the total infrastructure required for PEV drivers.

## Analysis of Problem

A first level plan has been developed by CEC, with ARB consultation, which provides a supply and demand approach to PEV power needs and the associated supply. However, in order to facilitate greater PEV adoption and increase electric vehicle miles driven, a more sophisticated approach is needed for PEV deployment. In order to better understand PEV user energy needs and environmental benefits, additional analyst resources are needed. For example, charging infrastructure plans will need to more comprehensively address PEV usage in multi-unit dwellings (e.g., apartments), while at the same time adjusting to vehicle technology changes as batteries become larger with longer driving range. Additionally, ARB, CEC, and PUC will need to begin evaluating charging infrastructure needs for heavy duty vehicles and locomotives, both of which are expected to expand into PEV technology to meet long-term emission requirements. ARB's Sustainable Freight Initiative and Mobile Source Strategies for the SIP both drive the need for electric vehicles in heavy applications.

### Evaluating Existing Electric Charging Infrastructure Utilization

Additionally, subdivision (c) of section 740.12 requires the PUC to evaluate the current utilization of charging infrastructure before approving new investments. Very little of the State's charging infrastructure has real-time data collection that would inform evaluation of charger utilization (e.g. hours used per day). Some infrastructure may have data from video feeds or hourly parking rates, but both of these sources of data would only inform whether the vehicles were plugged in, not how much electricity was provided during that time. Vehicles commonly remain plugged in after the battery is fully charged. ARB's ZEV market analysis provides information that would be useful for this evaluation. Finally, subdivision (c) also states the need to understand ZEV market "barriers" unrelated to electricity provider investments. Comprehensively evaluating market barriers is a collective role of ARB, PUC, and CEC as part of the many programs in place. The Governor's ZEV Action Plan is the formal forum to collaborate, but targeted agency efforts are also important.

ARB is seeking 1.0 permanent FT ARE to support the analysis required by SB 350. Additional details on the types of analysis and implementation tasks are defined in Section G below.

### Study on Barriers and Recommendations for Low-income Customers to Obtain Zero-Emission and Near-Zero-Emission Transportation Options (Including those in Disadvantaged Communities)

Transitioning to zero and near-zero advanced technologies is a challenge economically and technologically for many California consumers. Incentive programs help bridge gaps economically by increasing advanced technology production volumes to help drive down costs. Further, effective incentive programs demonstrate projects that foster consumer acceptance of new technologies. These programs also support private sector development and refinement of these technologies.

ARB has been providing incentives to California consumers to encourage them to purchase advanced technology vehicles through the Clean Vehicle Rebate Project (CVRP). In addition, ARB has begun to implement pilot projects that will increase opportunities for low-income consumers in disadvantaged communities to have access to zero-emission and near-zero-emission transportation options. These projects include the Enhanced Fleet Modernization Program (EFMP) that offer incentives for replacing an old, high polluting vehicle with a newer, cleaner vehicle; financing mechanisms to consumers that may not have the ability to finance vehicle purchases; and car sharing, ride sharing, and other mode-shifting transportation programs.

SB 350 requires ARB, in consultation with CEC and other relevant State agencies and the public, to develop and publish a study on barriers and recommendations to increase access for low-income customers to have zero-emission and near-zero-emission transportation options, including those in disadvantaged communities. The disadvantaged community-focused components of the incentive projects mentioned above are in the early stages of implementation and data from these programs will help provide important information to develop this study. In addition, ARB staff will look at other sources of information including, but not limited to, a literature review of existing research on related

topics and other local and state projects being administered to increase access to zero-emission and near-zero-emission transportation options.

Prior to the adoption of SB 350, ARB had approved funding for a broader research project to evaluate the light-duty incentive program overall, which includes evaluating the most effective forms of incentives to encourage low-income consumers to adopt zero-emission or near-zero-emission transportation options as well as the barriers they currently face to adopting these technologies. The results of this research project are expected in mid-2018. The study and this research project should be able to provide guidance and recommendations useful to policy makers and project administrators.

ARB is requesting 1.0 permanent FT ARE in order to meet the anticipated workload for this study. This position will develop and conduct a study while ensuring that the level of rigor for program recommendations is sufficient and useful for policy development.

***Reduction of GHGs in the Electricity Sector***

The energy sector is the State's largest contributor to greenhouse gas emissions, presently accounting for about 50 percent of California's total greenhouse gas emissions. Therefore, efforts to reduce energy-related emissions are a key component of the Governor's climate change strategies. Under SB 350, ARB, in consultation with PUC and CEC, would also be tasked with setting GHG planning targets for the integrated resource planning (IRP) process the agencies have been tasked with developing under SB 350 for the electricity sector and each load-serving entity (LSE); these targets must reflect the electricity sector's percentage in achieving economy-wide greenhouse gas emission reductions of 40 percent from 1990 levels by 2030. There are approximately 50 load-serving entities (utilities) in the state. This provision confirms support for ARB's existing authority to set greenhouse gas limits across the economy.

The budget proposal includes 1.0 permanent FT ARE to consult with PUC and CEC on setting the planning targets, to accommodate the new workload anticipated from monitoring electricity sector covered entities to determine if there are any adverse implications for the market, and to coordinate on PUC's and CEC's periodic updates to the planning targets. Additional details on the type of market monitoring and coordination tasks are defined in the Section G below.

ARB's existing staff resources for AB 32 are fully engaged with the regulatory development, amendment, and implementation of AB 32 programs, including the Cap-and-Trade Program and the associated auctions. These resources are also engaged in other regulatory program development and oversight, as well as the update to the Scoping Plan. Therefore, 1.0 ARE position is needed to set GHG planning targets, monitor and determine if the IRP planning targets have any adverse implications for the market, and coordinate with the PUC and CEC on their periodic updates to the IRP planning targets.

## B. Background/History

**Assembly Bill 32**

The California Global Warming Solutions Act of 2006, (AB 32, Núñez, Chapter 488, Statutes of 2006) requires California to reduce GHG emissions to 1990 levels by 2020 and to develop a comprehensive strategy to reduce dependence on fossil fuels, stimulate investment in clean and efficient technologies, and improve air quality and public health. AB 32 also requires ARB to work with other states and nations to identify and facilitate the development of integrated and cost-effective regional, national, and international GHG reduction programs.

The Cap-and-Trade Program is a key element of California's GHG reduction strategy. It establishes a declining limit on 85 percent of statewide GHG emissions, and creates a powerful economic incentive for major investment in cleaner, more advanced technologies. The Cap-and-Trade Program also gives businesses the flexibility to choose the lowest-cost approach to reducing emissions.

### Executive Order B-30-15

Governor's Executive Order B-30-15 establishes a California GHG reduction target of 40 percent below 1990 levels by 2030. This new reduction target represents the most aggressive benchmark enacted by any government in North America to reduce GHG emissions over the next 15 years. The new target is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions – and aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris later this year. The 2030 target will also make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050 as stated in Executive Order S-3-05.

### Executive Order B-16-12

The Governor's Executive Order B-16-2012 establishes the Administration's targets for electric vehicles in California. Specifically, building on the projections from ARB's ZEV mandate, B-16-2012 sets a target of 1.5 million ZEVs on the State's roads by 2025. It also requires that sufficient electric charging and hydrogen infrastructure be in place by 2020 to support up to one million ZEVs. This Executive Order led to the creation of the Governor's Office ZEV Action Plan, which outlines multiple State agency actions necessary to support the growing ZEV market. Actions are defined for the PUC, CEC, and ARB to provide that charging and hydrogen infrastructure is expanding throughout the State.

### Workload Metrics

ARB's past experience with electric vehicle fueling infrastructure analysis provides a justification for the one person year resource request. Over the past few years, ARB has been a partner with CEC in evaluating the hydrogen fueling infrastructure, as required by AB 8. In this effort, in consultation with CEC, ARB conducts technology analysis on the infrastructure network, including the network geographic coverage and station fuel throughout and utilization. Additionally, ARB leads a number of studies to understand how current PEV drivers use the charging infrastructure. Our experience with these multiple areas of analysis has informed our estimate of the 1.0 position resource need for SB 350 in the area of transportation electrification.

Experience with ARB's existing Cap-and-Trade Program provides a basis for estimating potential work metrics under the budgetary proposal for establishing GHG targets for the electricity sector and individual utilities with ongoing implementation and program monitoring. ARB has developed a statewide GHG target for all of the sectors included in the Cap-and-Trade program. The program also has a methodology for providing allowances to each load-serving entity. The development of the statewide GHG target was part of a public process that lasted over a year, and the methodology to review and develop a comprehensive allocation methodology for each utility also required over a year of development with public process. These activities required 2.0 FT staff to develop over about two years with some overlapping time. The staff is now implementing the program and beginning to work on the next set of regulatory amendments.

The Cap-and-Trade Program also has a dedicated section of market monitoring staff. The staff monitor the activities of all market participants to provide for integrity in the market, efficient market operations, and coordination with energy market regulators to monitor for potential impacts of the primary carbon market on related energy markets and vice versa. There are 8.0 staff that work in this section and audit activities of approximately 400 entities operating under the same GHG reduction requirements.

Under this proposal, ARB conservatively anticipates the ability to monitor the covered entities subject to the IRP planning targets to determine if there are any adverse implications for the market and to coordinate with the PUC's and CEC's periodic updates to the IRP planning targets.

## C. State Level Considerations

Statewide, there are now approximately 150,000 PEVs on the road all of which derive most of their energy needs from the electric grid. This is a small start towards the required 1.5 million ZEVs by 2025, which requires a growth rate in sales of new technology without precedent in the automotive industry. This rapidly growing vehicle technology and consumer market will put strain on utility electric grid distribution systems and will increase electricity demand from residential and commercial properties.

Although, the quantity of electricity demand for PEVs will remain small compared to the State's current electricity production for some time, infrastructure development and grid management will require large investments and planning efforts. Currently, to support the 150,000 PEVs, most of the residential dwellings for these drivers have home charging, and there are approximately 6,000 public electric chargers.

## D. Justification

Currently, ARB relies on CEC and the PUC for the majority of PEV infrastructure assessments, and provides vehicle projection and market analysis to support them. It is ARB's understanding that these two commissions are limited in their resource capability to fully perform this analysis. Additionally, ARB will need to better coordinate with the PUC on electric utility charging investments to understand its impact on the vehicle market and consumer usage of infrastructure to maximize their electric miles driven. ARB does not currently have the resources to focus on this area of analysis. Finally, there are no current resources defined to specifically study the question of existing charger utilization, which will inform new electric utility charger investments.

Currently, ARB does not have the staff to develop and conduct a study on increasing access to zero-emission and near-zero-emission transportation options on or before January 1, 2017, and will require one new staff to fully develop the analysis that meets the new statutory requirements of the bill.

Currently, ARB does not have staff to develop separate planning targets for the electricity sector and individual utility IRPs' planning targets and see that those activities are coordinated with the update to the Scoping Plan to reflect the 2030 target and the amendments to the Cap-and-Trade Program. Additional staff is needed to focus on the IRPs' planning targets for this sector and individual utilities exclusively, while coordinating with the larger ongoing efforts. Implementation of the IRP planning targets, alongside the broader Cap-and-Trade program, will also require more focused market monitoring and coordination with other energy agencies to detect and address any potential adverse implications for the primary carbon and related energy markets. The existing market monitoring staff will continue to conduct their ongoing duties of monitoring the broader California-Quebec linked market and auctions.

## E. Outcomes and Accountability

Under this proposal, ARB will fulfill its responsibilities under AB 32 to support emission reductions to achieve the 2020 target, and maintain emissions reductions to achieve the mid-term 2030 and long-term 2050 statewide GHG emissions goals established in Executive Orders B-30-15 and S-3-05, respectively. Progress and outcomes could be measured by increased penetration of PEVs in the California market, increased purchases by consumers in low income and disadvantaged communities, and reductions in GHGs in the electricity sector and individual utilities as electricity demand increases. Progress and outcomes could also be measured by the development of new statewide policies to address barriers to electrification in the transportation sector as identified by the proposed study.

## F. Analysis of All Feasible Alternatives

Alternative 1 (Recommended Alternative): Provide 3.0 permanent FT positions.

This alternative provides the needed resources to support increased electrification of the transportation sector, identify any barriers and recommendations to access to zero or near-zero emissions transportation options for consumers in low income and disadvantaged communities, and set IRP planning targets for the electricity sector and individual utility targets to reduce GHGs while demand for electricity increases. This alternative provides the needed resources for ARB to start conducting all the tasks laid out above concurrently to provide for availability and access to clean energy transportation for Californians, while simultaneously working to reduce GHGs in the electricity sector as demand increases.

Alternative 2: Provide 2.0 permanent FT positions.

This alternative would provide reduced allocation of requested staff by eliminating the one position to conduct the study discussed previously. This alternative would not provide the staff needed for ARB to study and identify barriers and provide recommendations for increasing access to zero or near-zero

emissions transportation options for consumers in low income and disadvantage communities. Policymakers and project administrators would not have the critical information SB 350 identified to better understand barriers and provide recommendations for increasing access to low income consumers to zero and near-zero emission transportation options.

Alternative 3: Provide 1.0 permanent FT position.

This alternative would provide reduced allocation of requested staff by eliminating one ongoing position for the tasks related to the IRP planning target in the electricity sector. This alternative would not provide the staff needed for ARB to develop IRP planning targets in a timely manner to support broader GHG policies for achieving the statewide GHG reduction goals and, then, subsequent monitoring of the Cap-and-Trade Program for potential issues related to the IRP planning targets. Any impacts to the efficiency of the Cap-and-Trade Program could increase compliance costs for all regulated entities, potentially result in adverse impacts to related energy markets, and increase costs for energy and goods in the State.

Alternative 4: Provide no additional resources.

This alternative would provide no additional staff. Under this alternative, ARB would lack the resources to coordinate with sister agencies and identify and adopt appropriate policies to remove regulatory disincentives that keep utilities from investing in transportation electrification, consult on multi-year programs and investments to achieve transportation electrification, study how to increase access to zero and near-zero emission transportation options for low-income and disadvantaged communities, and establish electricity and individual utility planning targets to support IRPs as required by SB 350.

## G. Implementation Plan

Types of Analysis – PEV infrastructure investments by electric utilities

1. Coordinate with PUC on PEV projections in the vehicle fleet, their electricity demands and time of day charging. Deeper coordination is required from this law and will require ARB to consider PUC input on vehicle and electric grid assumptions.
2. New analysis for charging networks and electricity demand from heavy duty PEV applications, namely trucks, buses and locomotives to meet the need for emission reductions in all mobile sectors. This new analysis will need to study electricity demand and distribution network designs. Plans are not in place at CEC or PUC to do this.
3. New analysis of existing charging infrastructure utilization. Evaluate how current chargers are being used, and how much excess utilization is important to provide PEV users a comfort in the market that charging access is available. Plans are not in place at CEC or PUC to do this.

Task Implementation – PEV infrastructure investments by electric utilities

4. This analysis will require energy demand scenario modeling, vehicle technology evaluations, and network design analysis.
5. This analysis will require close coordination and data sharing with CEC and PUC to inform PUC proceedings on SB 350, as well as CEC's proceedings on AB 8 infrastructure investments. It will require workshops and staff reports to gather stakeholder input.

Task Implementation - Study on Barriers and Recommendations for Low-income Customers to Obtain Zero-Emission and Near-Zero-Emission Transportation Options (Including those in Disadvantaged Communities)

## Analysis of Problem

| Workload Measure | FY 2016-17 | FY 2017-18 & on-going |
|---|---|---|
| Study | • 2.0 ARE, $324,000<br>• Review existing literature from published studies on this topic including possible interviews with academia, transportation organizations, and public agencies including CEC<br>• Conduct meetings including at least one public meeting with CEC, other public agencies, and stakeholders.<br>• Obtain and analyze data from existing incentive projects, ongoing research projects, and other programs designed to increase availability of transportation options for consumers.<br>• Create a panel for peer review for understanding barriers and policy recommendations. | • 2.0 ARE, $324,000<br>• Continue to work with agencies, stakeholders, and policy makers so that barriers and recommendations are well understood and communicated effectively.<br>• Include any updates or recognition of additional barriers or recommendations after the study is published when providing this information to the public and policy makers. |

Task Implementation – GHG Planning Targets for Integrated Resource Planning:

1. Evaluation and establishment of GHG planning targets for PUC's and CEC's IRP process under development
2. Coordination with other Scoping Plan development so that the policies and measures identified in the Scoping Plan support the approved IRP planning targets
3. Coordination with the Cap-and-Trade program so that the proposed IRP planning targets do not disrupt the existing economy-wide Cap-and-Trade program
4. Ongoing monitoring so that the established IRP planning targets do not have adverse implications for the Cap-and-Trade program
5. Ongoing coordination with PUC and CEC on its periodic updates to the IRP planning targets.

| Workload Measure | 2016-2017 | 2017-2018 & on-going |
|---|---|---|
| • Evaluate and establish IRP planning targets in consultation with PUC and CEC<br>• Evaluate any potential adverse implications the IRP planning targets may have on the market and on the overall functioning of the broader carbon market.<br>• Evaluate and monitor for market manipulation within the electricity sector across load-serving entities and potential adverse broader carbon market activity that may unnecessarily result in manipulation of the electricity sector carbon market compliance costs.<br>• Monitor relationship between electricity sector and load-serving entity carbon market activity and related energy markets.<br>• Coordinate with other Scoping Plan development, Cap-and-Trade program, and PUC and CEC on periodic IRP planning target updates | 1.0 ARE<br>$161,000 | 1.0 ARE<br>$161,000 |

## H. Supplemental Information

None.

## I. Recommendation

ARB recommends approval of Alternative 1, which would provide 3.0 permanent FT positions to fulfill ARB's responsibility to increase clean energy transportation – particularly for consumers in low income or disadvantaged communities – and reduce electricity sector GHG emissions while demand for electricity increases in furtherance of the goals of SB 350.

| Air Resources Board | | | | | | Attachment A<br>Workload Justification |
|---|---|---|---|---|---|---|
| **Fund:** | COI | | | | | |
| **Position Title:** | Air Resources Engineer 1 - ACC Technology | | | | | |
| **Workload Measure** | FY 2016-17 | | | FY 2017-18 | | |
| **Description of task** | **Number of Times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** | **Number of times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** |
| Coordinate with PUC on PEV projections, electricty demand and time of day charging. (interagency meetings, stakeholder meetings, research) | 6 | 20 | 120 | 6 | 20 | 120 |
| Manage data gathering program to assertain station usage | 1 | 360 | 360 | 1 | 360 | 360 |
| Analysis of charging networks and electricity demand from heavy duty PEV applications | 1 | 360 | 360 | 1 | 360 | 360 |
| Energy demand scenario modeling, vehicle technology evaluatoins and network design | 1 | 400 | 400 | 1 | 400 | 400 |
| Write reports summarizing findings from above three topics | 1 | 360 | 360 | 1 | 360 | 360 |
| Meetings with stakeholders, management | 48 | 3 | 144 | 48 | 3 | 144 |
| Board presentations | 1 | 56 | 56 | 1 | 56 | 56 |
| **Total Hours** | | | 1,800 | | | 1,800 |

*1.0 Position Equivalent = 1,800 hours*

*Numbers are based on previous workload experience*

| Air Resources Board | | | | | Attachment A<br>Workload Justification | |
|---|---|---|---|---|---|---|
| **Fund:** | COI | | | | | |
| **Position Title:** | Air Resources Engineer 1 - Electricity Sector and Utility GHG Targets | | | | | |
| **Workload Measure** | FY 2016-17 | | | FY 2017-18 | | |
| **Description of task** | **Number of Times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** | **Number of times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** |
| Review sector and individual utility GHG resource profiles and long term procurement plans for increasing RPS to establish GHG targets | 54 | 20 | 1,080 | - | - | - |
| Conduct meetings including one public meeting with CEC, CPUC, affected utilities, and stakeholders | 40 | 4 | 140 | - | - | - |
| Obtain and analyze data on sector relative to statewide GHGs & coordinate with Scoping Plan and 111(d) development | 1 | 225 | 225 | - | - | - |
| Monitor electricity sector and individual utility behaviour in the Cap-and-Trade Program and related markets to ensure carbon market integrity and no adverse impacts with related energy markets | | | | 1 | 1,600 | 1,600 |
| Write study/report summarizing findings from above topics | 1 | 200 | 200 | 1 | 80 | 80 |
| Meetings with stakeholders, policy makers, management | 20 | 5 | 100 | 30 | 3 | 90 |
| Board presentations | 1 | 55 | 55 | 1 | 30 | 30 |
| **Total Hours** | | | 1,800 | | | 1,800 |

*1.0 Position Equivalent = 1,800 hours*

*Numbers are based on previous workload experience*

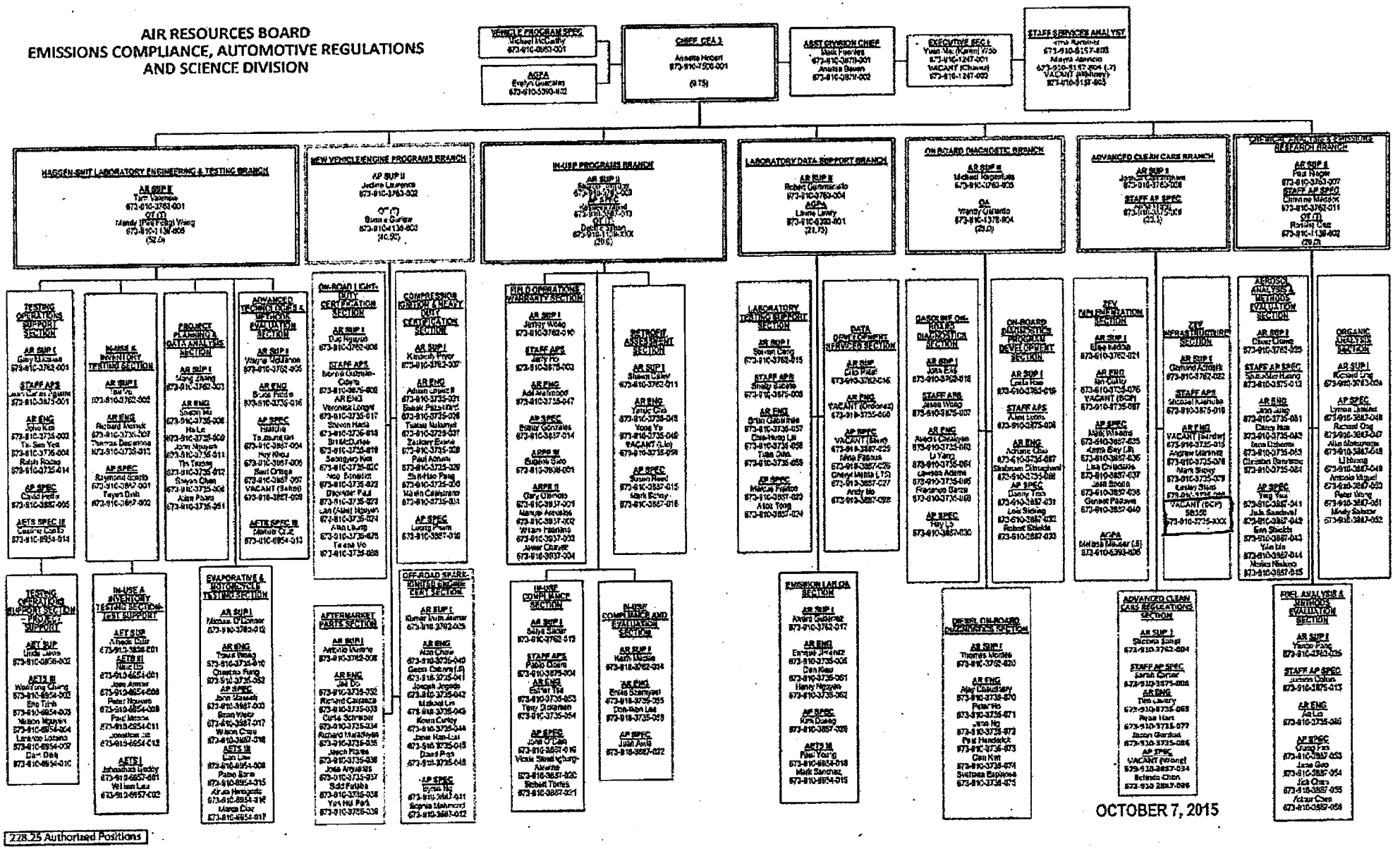
| Air Resources Board | | | | | | Attachment A<br>Workload Justification |
|---|---|---|---|---|---|---|
| **Fund:** | COI | | | | | |
| **Position Title:** | Air Resources Engineer 1 - Transportation Study | | | | | |
| **Workload Measure** | FY 2016-17 | | | FY 2017-18 | | |
| **Description of task** | **Number of Times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** | **Number of times the task was performed** | **Number of hours needed to complete task** | **Total number of annual hours** |
| Review existing literature from published studies including initerviews with academia, transportation organizations, and public agencies. | 25 | 15 | 375 | 25 | 15 | 375 |
| Conduct meetings including one public meeting with CEC, other public agencies, and stakeholders | 30 | 5 | 150 | 30 | 5 | 150 |
| Obtain and analyze data from existing incentive projects, ongoing research project, and consumer based transportation programs | 1 | 350 | 350 | 1 | 350 | 350 |
| Create and work with panel for peer review for understanding barriers and policy recommendations | 1 | 350 | 350 | | | - |
| Continue to work with panel for peer review for barriers and adjusting policy recommendations | | | | 1 | 405 | 405 |
| Write study/report summarizing findings from above topics | 1 | 400 | 400 | | | - |
| Update study as new information is made available | | | | 1 | 400 | 400 |
| Meetings with stakeholders, policy makers, management | 40 | 3 | 120 | 40 | 3 | 120 |
| Board presentations | 1 | 55 | 55 | - | | - |
| **Total Hours** | | | 1,800 | | | 1,800 |

*1.0 Position Equivalent = 1,800 hours*

*Numbers are based on previous workload experience*

Proposed

# AIR RESOURCES BOARD
# EMISSIONS COMPLIANCE, AUTOMOTIVE REGULATIONS AND SCIENCE DIVISION



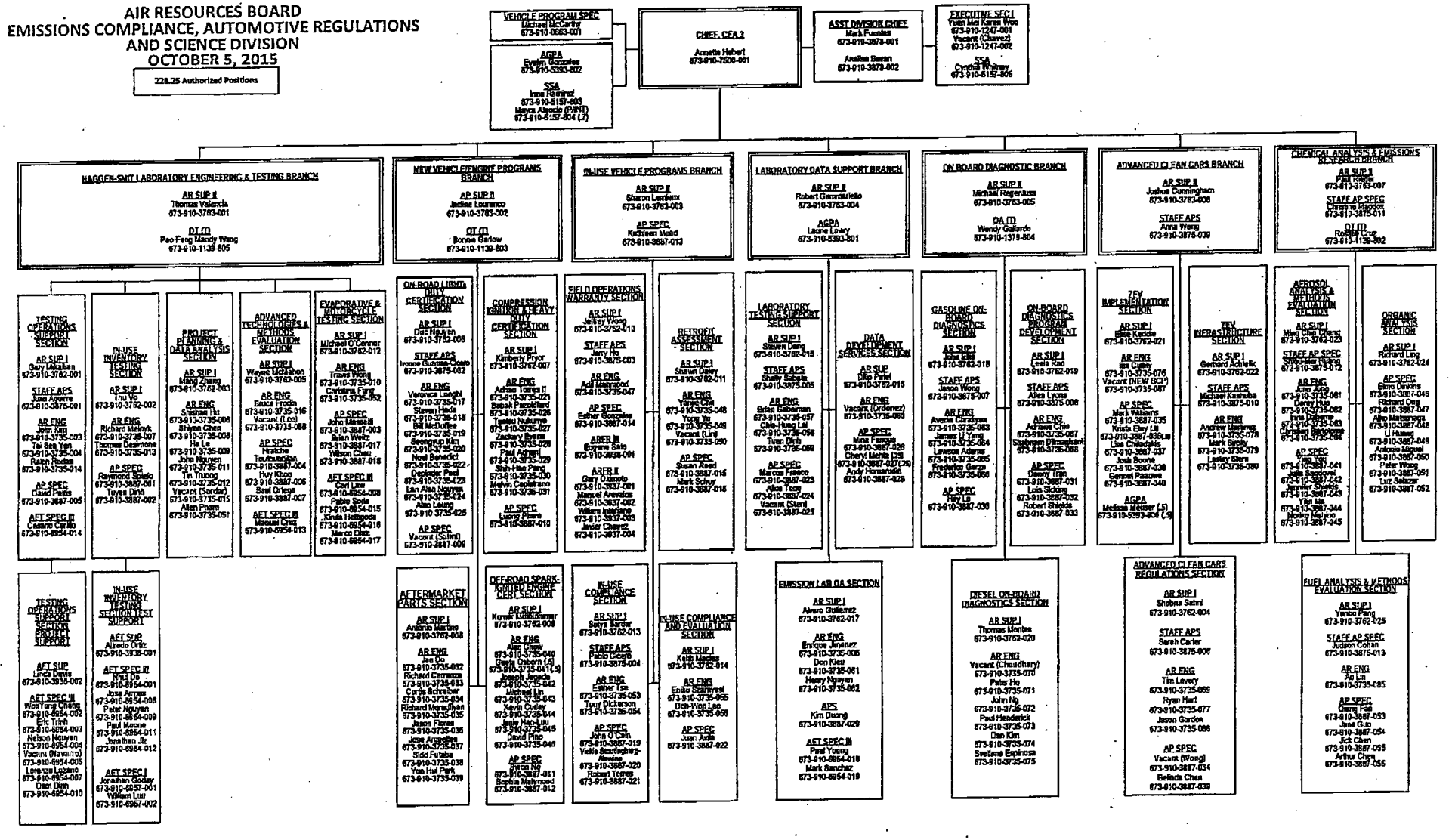

228.25 Authorized Positions

OCTOBER 7, 2015

Current

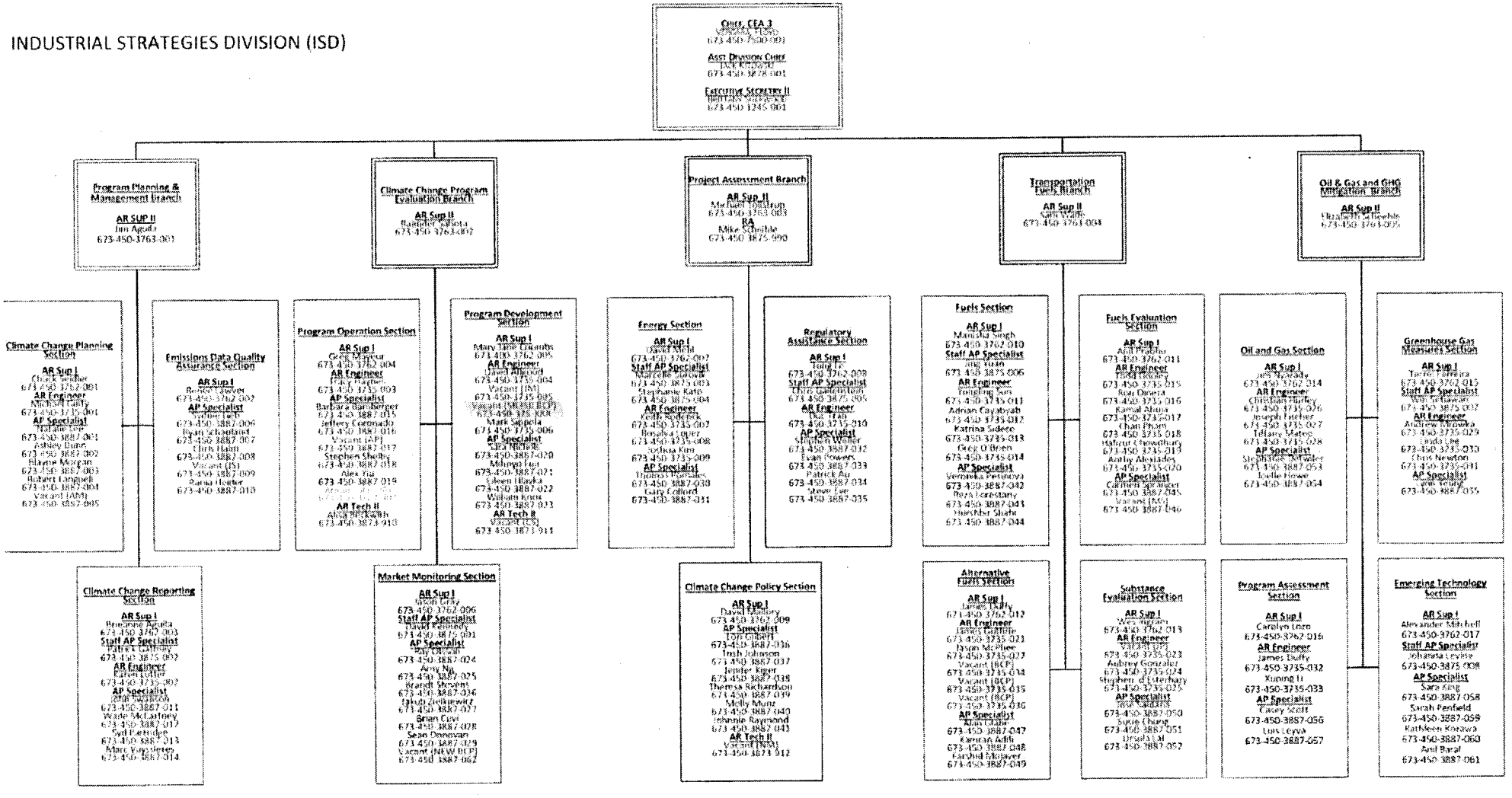
# AIR RESOURCES BOARD
# EMISSIONS COMPLIANCE, AUTOMOTIVE REGULATIONS AND SCIENCE DIVISION
## OCTOBER 5, 2015

228.25 Authorized Positions



Proposed

# INDUSTRIAL STRATEGIES DIVISION (ISD)



# AIR RESOURCES BOARD
# INDUSTRIAL STRATEGIES DIVISION
## OCTOBER 5, 2015

131.55 Authorized Positions
1 Blanket Position

**ASST DIVISION CHIEF**
Jack Kitowski
673-450-3878-001

**CHIEF, CEA 3**
Floyd Vergara
673-450-7500-001

**EXEC SEC II**
Brittany Sherwood
673-450-1245-001

---

## PROGRAM PLANNING & MANAGEMENT BRANCH

**AR SUP II**
Jim Aguila
673-450-3763-001

### CLIMATE CHANGE PLANNING SECTION

**AR SUP I**
Chuck Seidler
673-450-3762-001

**AR ENG**
Michael Ginty
673-450-3735-001

**AP SPEC**
Natalie Lee
673-450-3887-001
Ashley Dunn
673-450-3887-002
Blayne Morgan
673-450-3887-003
Robert Languell
673-450-3887-004
Vacant (Mebust)
673-450-3887-005

### EMISSIONS DATA QUALITY ASSURANCE SECTION

**AR SUP I**
Renee Lawver
673-450-3762-002

**AP SPEC**
Sydnie Lieb
673-450-3887-006
Ryan Schauland
673-450-3887-007
Chris Halm
673-450-3887-008
Vacant (Swanson)
673-450-3887-009
Rania Heider
673-450-3887-010

### CLIMATE CHANGE REPORTING SECTION

**AR SUP I**
Brieanne Aguila
673-450-3762-003

**STAFF APS**
Patrick Gaffney
673-450-3875-002

**AR ENG**
Karen Lutter (.95)
673-450-3735-002(.95)

**AP SPEC**
John Swanson
673-450-3887-011
Wade McCartney
673-450-3887-012
Syd Partridge
673-450-3887-013
Marc Vayssieres
673-450-3887-014

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## CLIMATE CHANGE PROGRAM EVALUATION BRANCH

**AR SUP II**
Rajinder Sahota
673-450-3763-002

### PROGRAM OPERATION SECTION

**AR SUP I**
Greg Mayeur
673-450-3762-004

**AR ENG**
Tracy Haynes
673-450-3735-003

**AP SPEC**
Barbara Bamberger
673-450-3887-015
Jeffery Coronado
673-450-3887-016
Vacant (Pal)
673-450-3887-017
Stephen Shelby
673-450-3887-018
Alex Yiu
673-450-3887-019
Arnab Pal
673-450-3887-902

### PROGRAM DEVELOPMENT SECTION

**AR SUP I**
Mary Jane Coombs
673-450-3762-005

**AR ENG**
David Allgood
673-450-3735-004
Vacant (McPhee)
673-450-3735-005
Mark Sippola
673-450-3735-006

**AP SPEC**
Sara Nichols
673-450-3887-020
Mihoyo Fuji
673-450-3887-021
Eileen Hlavka
673-450-3887-022
William Knox
673-450-3887-023

### MARKET MONITORING SECTION

**AR SUP I**
Jason Gray
673-450-3762-006

**STAFF APS**
David Kennedy
673-450-3875-001

**AP SPEC**
Ray Olsson
673-450-3887-024
Amy Ng
673-450-3887-025
Brandt Stevens
673-450-3887-026
Jakub Zielkiewicz
673-450-3887-027
Brian Covi
673-450-3887-028
Sean Donovan
673-450-3887-029
Vacant (BCP)
673-450-3887-062

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## PROJECT ASSESSMENT BRANCH

**AR SUP II**
Michael Tollstrup
673-450-3763-003

### ENERGY SECTION

**AR SUP I**
David Mehl
673-450-3762-007

**STAFF APS**
Marcelle Surovik
673-450-3875-003
Stephanie Kato
673-450-3875-004

**AR ENG**
Keith Roderick
673-450-3735-007
Rosalva Lopez
673-450-3735-008
Joshua Kim
673-450-3735-009

**AP SPEC**
Thomas Pomales
673-450-3887-030
Gary Collord
673-450-3887-031

### REGULATORY ASSISTANCE SECTION

**AR SUP I**
Tung Le
673-450-3762-008

**STAFF APS**
Chris Gallenstein
673-450-3875-005

**AR ENG**
Duc Tran
673-450-3735-010

**AP SPEC**
Stephen Weller
673-450-3887-032
Evan Powers
673-450-3887-033
Patrick Au
673-450-3887-034
Steve Eve
673-450-3887-035

### CLIMATE CHANGE POLICY SECTION

**AR SUP I**
David Mallory
673-450-3762-009

**AP SPEC**
Lori Gilbert
673-450-3887-036
Trish Johnson
673-450-3887-037
Jenifer Kiger (.8)
673-450-3887-038 (.8)
Theresa Richardson
673-450-3887-039
Molly Munz (.8)
673-450-3887-040 (.8)
Johnnie Raymond
673-450-3887-041

---

## TRANSPORTATION FUELS BRANCH

**AR SUP II**
Sam Wade
673-450-3763-004

### FUELS SECTION

**AR SUP I**
Manisha Singh
673-450-3762-010

**STAFF APS**
Jing Yuan
673-450-3875-006

**AR ENG**
Yongling Sun
673-450-3735-011
Adrian Cayabyab
673-450-3735-012
Katrina Sideco
673-450-3735-013
Greg O'Brien
673-450-3735-014

**AP SPEC**
Veronika Pesinova
673-450-3887-042
Reza Lorestany
673-450-3887-043
Hurshbir Shahi
673-450-3887-044

### FUELS EVALUATION SECTION

**AR SUP I**
Anil Prabhu
673-450-3762-011

**AR ENG**
Todd Dooley
673-450-3735-015
Ron Oneza
673-450-3735-016
Kamal Ahuja
673-450-3735-017
Chan Pham
673-450-3735-018
Hafizur Chowdhury
673-450-3735-019
Anthy Alexiades
673-450-3735-020

**AP SPEC**
Carmen Spranger
673-450-3887-045
Vacant (Surovik)
673-450-3887-046

### ALTERNATIVE FUELS SECTION

**AR SUP I**
James Duffy
673-450-3762-012

**AR ENG**
James Guthrie
673-450-3735-021
Jason McPhee
673-450-3735-022
Vacant (BCP)
673-450-3735-034
Vacant (BCP)
673-450-3735-035
Vacant (BCP)
673-450-3735-036

**AP SPEC**
Alan Glabe
673-450-3887-047
Kamran Adili
673-450-3887-048
Farshid Mojaver
673-450-3887-049

### SUBSTANCE EVALUATION SECTION

**AR SUP I**
Wes Ingram
673-450-3762-013

**AR ENG**
Vacant (Peterson)
673-450-3735-023
Aubrey Gonzalez
673-450-3735-024
Stephen d'Esterhazy
673-450-3735-025

**AP SPEC**
Jose Saldana
673-450-3887-050
Susie Chung
673-450-3887-051
Ursula E. Lai
673-450-3887-052

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## OIL & GAS AND GHG MITIGATION BRANCH

**AR SUP II**
Elizabeth Scheehle
673-450-3763-005

### OIL AND GAS SECTION

**AR SUP I**
Jim Nyarady
673-450-3762-014

**AR ENG**
Christian Hurley
673-450-3735-026
Joseph Fischer
673-450-3735-027
Tiffany Mateo
673-450-3735-028

**AP SPEC**
Stephanie Detwiler
673-450-3887-053
Joelle Howe
673-450-3887-054

### PROGRAM ASSESSMENT SECTION

**AR SUP I**
Carolyn Lozo
673-450-3762-016

**AR ENG**
Vacant (Duffy)
673-450-3735-032
Xuping Li
673-450-3735-033

**AP SPEC**
Casey Scott
673-450-3887-056
Luis Leyva
673-450-3887-057

### GREENHOUSE GAS MEASURES SECTION

**AR SUP I**
Terrel Ferreira
673-450-3762-015

**STAFF APS**
Win Setiawan
673-450-3875-007

**AR ENG**
Andrew Mrowka
673-450-3735-029
Linda Lee
673-450-3735-030
Chris Newton
673-450-3735-031

**AP SPEC**
Lynn Yeung
673-450-3887-055

### EMERGING TECHNOLOGY SECTION

**AR SUP I**
Alexander Mitchell
673-450-3762-017

**STAFF APS**
Johanna Levine
673-450-3875-008

**AP SPEC**
Sara King
673-450-3887-058
Sarah Penfield
673-450-3887-059
Kathleen Kozawa
673-450-3887-060
Anil Baral
673-450-3887-061

# AIR RESOURCES BOARD
# MOBILE SOURCE CONTROL DIVISION
## NOVEMBER 5, 2015

130.65 Authorized Positions
7 Blanket Positions

**EXECUTIVE SEC II**
Bryan Lange
673-610-1245-001

**AGPA**
Vacant (Teuterio)
673-610-5393-702

**SSA**
Beth Chavez
673-610-5157-704

**CHIEF, CEA 3**
Erik White
673-610-7500-002

**ASST DIVISION CHIEF**
Vacant (San)
673-610-3878-003

**VEHICLE PROG SPECIALIST**
William Robertson
673-610-0663-002

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**INCENTIVES & TECHNOLOGY ADVANCEMENT BRANCH**

AR SUP II
Scott Rowland
673-610-3763-001

OT (T)
Samantha Gulde
673-610-1139-801

**ALTERNATIVE STRATEGIES SECTION**

AR SUP I
Aaron Hilliard
673-610-3762-001

AR ENG
Thomas Lovejoy
673-610-3735-004
Thomas Evashenk (.6)
673-610-3735-005 (.5)
Nicholas Nairn-Birch
673-610-3735-028
Kanwalpreet Bhatti
673-610-3735-008

AP SPEC
Nancy J. Noble
673-610-3887-003
Vacant (BCP)
673-610-3887-054

**CARL MOYER OFF-ROAD SECTION**

AR SUP I
David Salardino
673-610-3762-002

AR ENG
Katherine Garrison
673-610-3735-009
Danielle Robinson
673-610-3735-010
Yvonne Sanchez
673-610-3735-011

AP SPEC
Dinh Quach
673-610-3887-004
Rhonda Runyon
673-610-3887-005
Adriana Smith (PT/Job)
673-610-3887-006
Sukkha Chattopadhyay
673-610-3887-007

**INCENTIVES OVERSIGHT SECTION**

AR SUP I
Douglas Thompson
673-610-3762-003

AR ENG
Charles Bennett
673-610-3735-017
Wasim Ali
673-610-3735-013

AP SPEC
Herbert Fernando Berton
673-610-3887-008
Neva Lowery
673-610-3887-009
Kyle Goff
673-610-3887-010

AGPA
Sibyl Britton
673-610-5393-703

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**MOBILE SOURCE REGULATORY DEVELOPMENT BRANCH**

AR SUP II
Michael Carter
673-610-3763-002

OT (T)
673-610-1139-802
Angela Iniguez

**OFF-ROAD CONTROL SECTION**

AR SUP I
Ronald Haste
673-610-3762-004

STAFF APS
Jeff Lowry
673-610-3875-002

AR ENG
Hung-Li Chang
673-610-3735-014

AP SPEC
Jason Hill-Falkenthal
673-610-3887-011
Francine Baker (.75)
673-610-3887-013 (.75)
Utpala Ramesh
673-610-3887-013

**ON-ROAD HEAVY DUTY DIESEL SECTION**

AR SUP I
Stephan Lemieux
673-610-3762-005

STAFF APS
Alex Santos
673-610-3875-003

AR ENG
Lee Wang
673-610-3735-007
Daniel Hawelti
673-610-3735-015
Dipak Bishnu
673-610-3735-016
Susan O'Connor (.25)
673-610-3735-017 (.25)
Henry Cheung
673-610-3735-018

AP SPEC
Eloy Florez
673-610-3887-014
Vacant (Buffington)
673-610-3887-023

**STRATEGIC PLANNING & DEVELOPMENT SECTION**

AR SUP I
Kim Heroy-Rogalski
673-610-3762-006(.95)

STAFF APS
Marijke Bekken (.5)
673-610-3875-004 (.5)
Robert Nguyen
673-610-3875-005

AR ENG
Mitzi Claudette Magtoto
673-610-3735-019

AP SPEC
Krista Fregoso
673-610-3887-015
Inder Atwal
673-610-3887-016

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**INNOVATIVE STRATEGIES BRANCH**

AP SUP II
Lucina Negrete
673-610-3763-003

OT (T)
Marilyn Gomez
673-610-1139-001

**INNOVATIVE HEAVY-DUTY STRATEGIES SECTION**

AR SUP I
Peter Christensen
673-610-3762-007

AR ENG
Leslie Goodbody
673-610-3735-020
Michael Baker (.9)
673-610-3735-022 (.9)

AP SPEC
Ryan Murano
673-610-3887-018
Earl Landberg
673-610-3887-019
Lisa Williams
673-610-3887-020

**ADVANCED TRANSPORTATION INCENTIVE STRATEGIES SECTION**

AR SUP I
Sam Gregor
673-610-3762-008

AR ENG
Laura Zaremba-Schmidt
673-610-3735-021

AP SPEC
Lisa Jennings
673-610-3887-021
Kimya Lambert
673-610-3887-022
Timothy Hartigan
673-610-3887-028
Vacant (BCP)
673-610-3887-053

**INNOVATIVE LIGHT-DUTY STRATEGIES SECTION**

AR SUP I
Lisa Macumber
673-610-3762-009

STAFF APS
Andrew Panson
673-610-3875-007

AR ENG
Vacant (BCP)
673-610-3735-036

AP SPEC
Stella Ling-Taylor
673-610-3887-017
Grace Garcia
673-610-3887-025
Bianca Marshall
673-610-3887-027
Sara Dastoum
673-610-3887-034

**OFF-ROAD AGRICULTURAL STRATEGIES AND INCENTIVES SECTION**

AR SUP I
Vacant (BCP)
673-610-3762-019

STAFF APS
Michelle Buffington
673-610-3875-006

AR ENG
Vacant (BCP)
673-610-3735-035

AP SPEC
Meri Miles
673-610-3887-024
Vacant (BCP)
673-610-3887-052
Vacant (BCP)
673-610-3887-056

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**HEAVY-DUTY OFF-ROAD STRATEGIES BRANCH**

AR SUP II
Marilees Sicat
673-610-3763-004

**OFF-ROAD IMPLEMENTATION SECTION**

AR SUP I
John Kato
673-610-3762-010

AR ENG
Erin Uchida
673-610-3735-023

AP SPEC
Arthur Lee
673-610-3887-029
Thien Tran
673-610-3887-030
Todd Sterling
673-610-3887-031

**ADVANCED EMISSION CONTROL STRATEGIES SECTION**

AR SUP I
David Chen
673-610-3762-011

STAFF APS
Joseph Calavita
673-610-3875-008

AR ENG
David Eges
673-610-3735-024

APS
Matthew Diener
673-610-3887-032
Vacant (BCP)
673-610-3887-055

ARE
New BCP Position
SB 350

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**HEAVY DUTY DIESEL IMPLEMENTATION BRANCH**

AR SUP II
Tony Brasil
673-610-3763-005

OT (T)
Vacant (Enos-Friedman)
673-610-1139-803

**ZERO EMISSION TRUCK & BUS SECTION**

AR SUP I
Yachun Chow
673-610-3762-012

STAFF APS
Renee Littaua
673-610-3875-009

AR ENG
Vacant (Bekemohammadi)
673-610-3735-026
Vacant (BCP)
673-610-3735-037

AP SPEC
Vacant (Chen)
673-610-3887-026
Jennifer Fong Lee
673-610-3887-033

**IN-USE CONTROL MEASURES SECTION**

AR SUP I
Craig Duehring
673-610-3762-013

AR ENG
Balbir Dhaliwal
673-610-3735-027
Vacant (Carmichael)
673-610-3735-029

AP SPEC
Shirin Hajizadeh Barejani
673-610-3887-035
Chris Franceschi
673-610-3887-051

**ON-ROAD COMPLIANCE ASSISTANT SECTION**

AR SUP I
Elizabeth White
673-610-3762-014

AR ENG
Barry Ho
673-610-3735-030
Eric Nelson
673-610-3735-031
Geoffrey Carter
673-610-3735-032

AP SPEC
Jackie Johnson
673-610-3887-036
Tina Najjar
673-610-3887-037

---

**COMPLIANCE ASSISTANCE & OUTREACH BRANCH**

AR SUP II
Annmarie Rodgers
673-610-3763-006

OT (T)
Abby Eckrich (.5)
673-610-1139-804 (.5)

MST
Andrea Gorman
673-610-5278-001

**COMPLIANCE & INCENTIVES ASSISTANCE SECTION**

ARS UP I
Hardip Ahluwalia
673-610-3762-015

AR ENG
Eric Patton
673-610-3735-033

AP SPEC
Walter Gothberg
673-610-3887-038
Michael Donnelly
673-610-3887-039
Violet Martin
673-610-3887-040
Vacant (BCP)
673-610-3887-057

**COMPLIANCE ASSISTANCE & OUTREACH SECTION**

AR SUP I
Bruce Tuter
673-610-3762-017

AP SPEC
Steven Toft
673-610-3887-045
Brandon Rose
673-610-3887-046
Raquel Leon
673-610-3887-047
Yvette DiCarlo
673-610-3887-048
Boons Baythavong
673-610-3887-049

**COMPLIANCE ASSISTANCE & TRAINING SECTION**

AR SUP
Mark Tavantzi
673-610-3762-016

AR ENG
Joseph Gormley
673-610-3735-034

AP SPEC
Vacant (Cropper)
673-610-3887-041
Danielle Chambers
673-610-3887-042
Randy Opfer
673-610-3887-043
David Cunkleman
673-610-3887-044

**COMPLIANCE CALL CENTER SECTION**

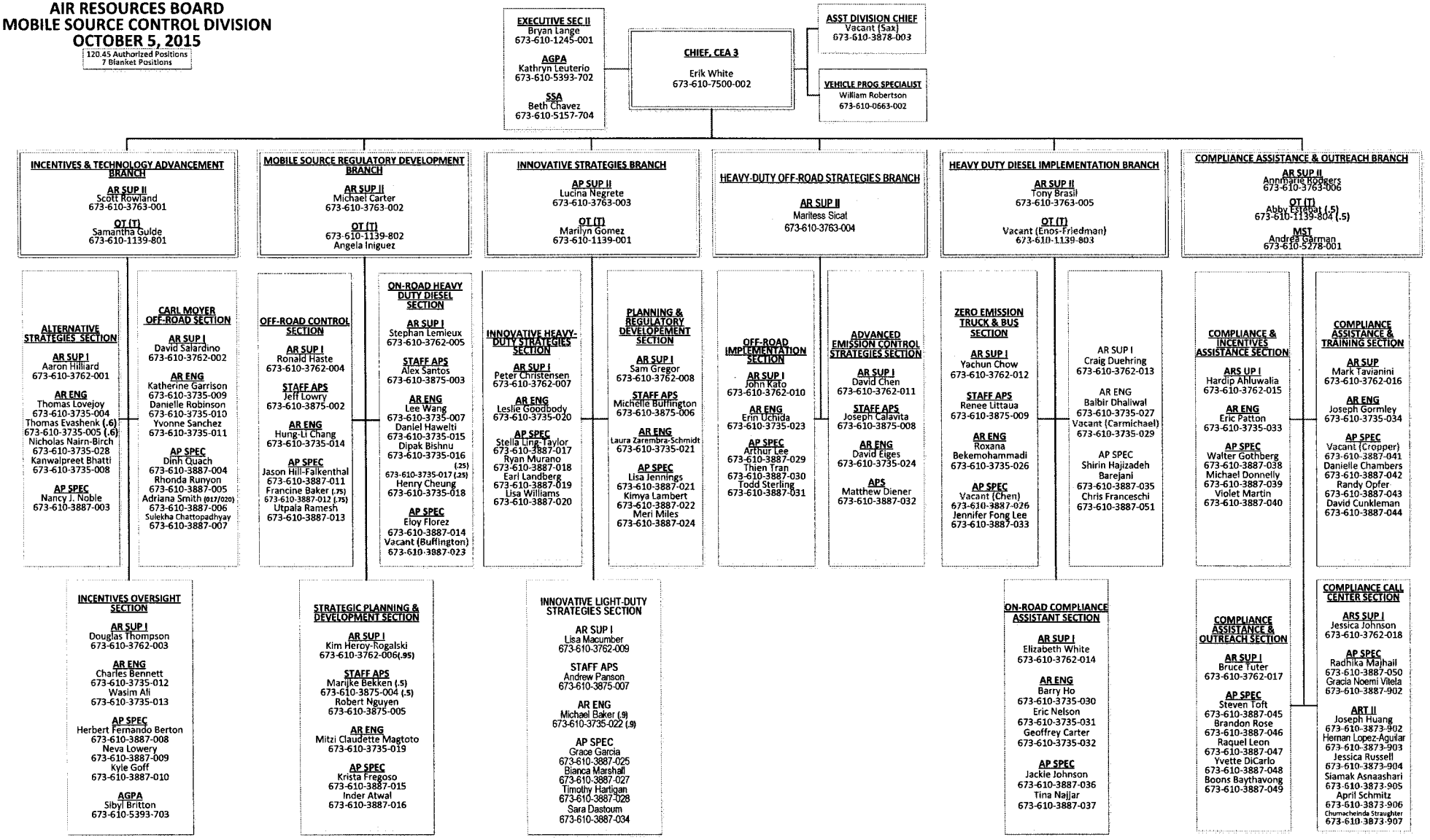
ARS SUP I
Jessica Johnson
673-610-3762-018

AP SPEC
Radhika Rajhall
673-610-3887-050
Gracia Noemi Vitela
673-610-3887-902

ART II
Joseph Huang
673-610-3872-902
Hernan Lopez-Aguilar
673-610-3373-903
Jessica Russell
673-610-3373-904
Siamak Asnaashari
673-610-3873-905
April Schmitz
673-610-3873-906
Chantel Miranda Straughter
673-610-3873-907

# AIR RESOURCES BOARD
# MOBILE SOURCE CONTROL DIVISION
## OCTOBER 5, 2015

120.45 Authorized Positions
7 Blanket Positions



# BCP Fiscal Detail Sheet

**BCP Title: Clean Energy and Pollution Reduction Act of 2015 (SB 350)**

**DP Name: 3900-012-BCP-DP-2016-GB**

## Budget Request Summary

| | FY16 | | | | | |
|---|---|---|---|---|---|---|
| | CY | BY | BY+1 | BY+2 | BY+3 | BY+4 |
| Positions - Permanent | 0.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| **Total Positions** | **0.0** | **3.0** | **3.0** | **3.0** | **3.0** | **3.0** |
| Salaries and Wages | | | | | | |
| Earnings - Permanent | 0 | 282 | 282 | 282 | 282 | 282 |
| **Total Salaries and Wages** | **$0** | **$282** | **$282** | **$282** | **$282** | **$282** |
| Total Staff Benefits | 0 | 131 | 131 | 131 | 131 | 131 |
| **Total Personal Services** | **$0** | **$413** | **$413** | **$413** | **$413** | **$413** |
| Operating Expenses and Equipment | | | | | | |
| 5301 - General Expense | 0 | 6 | 6 | 6 | 6 | 6 |
| 5302 - Printing | 0 | 3 | 3 | 3 | 3 | 3 |
| 5304 - Communications | 0 | 6 | 6 | 6 | 6 | 6 |
| 5320 - Travel: In-State | 0 | 12 | 12 | 12 | 12 | 12 |
| 5322 - Training | 0 | 3 | 3 | 3 | 3 | 3 |
| 5324 - Facilities Operation | 0 | 30 | 30 | 30 | 30 | 30 |
| 5346 - Information Technology | 0 | 12 | 9 | 9 | 9 | 9 |
| **Total Operating Expenses and Equipment** | **$0** | **$72** | **$69** | **$69** | **$69** | **$69** |
| **Total Budget Request** | **$0** | **$485** | **$482** | **$482** | **$482** | **$482** |

## Fund Summary

| | | | | | | |
|---|---|---|---|---|---|---|
| Fund Source - State Operations | | | | | | |
| 3237 - Cost of Implementation Account, Air | 0 | 485 | 482 | 482 | 482 | 482 |
| **Total State Operations Expenditures** | **$0** | **$485** | **$482** | **$482** | **$482** | **$482** |
| **Total All Funds** | **$0** | **$485** | **$482** | **$482** | **$482** | **$482** |

## Program Summary

| | | | | | | |
|---|---|---|---|---|---|---|
| Program Funding | | | | | | |
| 3510 - Climate Change | 0 | 485 | 482 | 482 | 482 | 482 |
| **Total All Programs** | **$0** | **$485** | **$482** | **$482** | **$482** | **$482** |